

Supplemental Amendment submitted in response
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REMARKS/ARGUMENTS

The Examiner is again warmly thanked for the courtesy of a telephonic discussion on July 22, 2005.

This Amendment is a supplemental amendment to the Amendment E, which was filed on May 23, 2005.

In the telephonic discussion of June 22, 2005, the Examiner and Applicants' representative (Joseph Nguyen, Esq.) discussed various additions to the claims, including the amended feature to claim 1 of automatic transmitting the reportable specification message from the sensor to the computing system of the process module of the substrate processing system.

Amended claim 1 now further includes the amended limitation of automatically transmitting the reportable specification message from the sensor to the computing system of the process module upon receiving the command to get reportable specification. Additionally, amended claim 1 further includes the amended limitation that requires the reportable specification message to include at least the data type specification of what the sensor intends to send. Finally, amended claim 1 now further includes the amended recitation that computing system of the process module use the reportable specification message received from the remote sensor to receive sensor data.

As discussed by Applicants' representative, these features facilitate the plug-and-play integration of any given sensor with the computing system of the process module of the substrate processing system.

It is the understanding of Applicants' representative that claim 1, as amended, now recite a combination of features that are not found in Kail, Steen, or Nakamura, alone or in combination.

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Kail (6,225,901)

Specifically, Kail (6,225,901) puts the responsibility for formatting the data on the remote unit prior to sending the data from the remote unit to the central unit. One can only assume that the "formatting" process at the remote unit ensure that the data will be in a format understandable by the central unit. If a sensor cannot format or cannot be programmed to do the aforementioned formatting to conform to the expectation of the central unit, Kail is silent with respect to how such a sensor can communicate with the central unit.

This is different from the approach of amended claim 1, which, among other features of the amended claim, requires the remote sensor to automatically transmit, upon receipt of a command to get reportable specification, the reportable specification message from the sensor to the computing system of the process module of the substrate processing system so that the computing system of the process module can use the reportable specification message, including the data type specification therein, to receive and/or understand the sensor data subsequently transmitted.

Steen (6,510,350)

Steen (6,510,350) is silent with regard to what to do if the remote unit communicates using a data specification that is different from that expected by the central unit. Steen simply assumes that the central unit ("operating software on the system provider's server") can understand the data being received from the CFU (Cybersensor field units).

Although column 3, lines 33-56 of Steen seems to broadly talk about updating "sends request to update a field parameter or request for up-to-date sensor data", a more in-depth reading reveals that Steen suggest that a user can update the CFU (Cybersensor Field Unit) via a servlet (such as the CyberVIP module or more specifically the CyberVIP screen). The field parameters of a CFU can be updated by a user via the CyberVIP screen ("A request to update a field or data parameter is accomplished by clicking on the "UPDATE" button in the CyberVIP or any software module that allows the parameters to be updated.") See Steen column 8, lines 12-15). The servlet (e.g., CyberVIP) can also be used by the user to obtain up-to-date sensor data

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from the CFU. Note that Steen does not discuss how to handle data specification mismatch. At best, Steen assumes that the user can manually change the field parameter at the CFU if needed.

Nakamura (6,233,492)

Like Steen, Nakamura (6,233,492) is silent about the possibility that the sensor units may have different data specifications and how to inform the central unit of the data specification of a given sensor unit so the central unit may subsequently receive and understand the sensor data transmitted from the remote sensor. Nakamura is directed toward averaging the control load so as to reduce data traffic congestion and to improve control stability. As a note, Nakamura is cited as a secondary reference in paragraph 10 of the Office Action dated February 24, 2005 to supply the features of "the process module having a process chamber, initializing the first sensor, which is able to measure a first parameter in the process chamber.")

Conclusion

In view of the foregoing and in view of the discussion conducted during the July 22, 2005 telephonic interview, it is respectfully submitted that Amended claim 1 as amended is novel, nonobvious, and patentable over the cited art of record, alone or in combination.

Claims 2-9 and 16-18, which depend from amended claim 1, further recite other independently patentable features. It is respectfully submitted that claims 2-9 and 16-18 are patentable at least for the reasons discussed above and also due to their recitations of other independently patentable features.

In view of the above, a Notice of Allowance is respectfully solicited. The Commissioner is authorized to charge any additional fees to process this Amendment, or credit any over-payments that may apply, to our Deposit Account No. 50-2284 (Order No. LMRX-P079/P0602).

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